

## LANdroid (BAA 07-46) Faq

Last updated 7/17/2007

### Preface:

In the event of a discrepancy between the material shown here and the LANdroids BAA, the LANdroids BAA takes precedence.

In the event of any discrepancies between material here and material on FedBizOps, the FedBizOps material takes precedence.

### Questions and Answers:

1. Question: Do I need to have a team to propose to this BAA?

Answer: Do what is necessary to make a compelling technical solution and have the expertise required to support that solution.

2. Question: Can I propose to both Task A and B?

Answer: Yes.

3. Question: I'm a little confused by the BAA's language about the target award size.

Answer: There are two technical tasks in this program – Task A and Task B. Task A pertains to the LANdroid control software. Task B pertains to building the LANdroid robot. With respect to Task A, the BAA articulates a target award size of \$1m per year, per effort, exclusive of options. This is intended to encourage control software that is appropriately scoped to run on small and inexpensive robotic LANdroid nodes. Propose what is right for your technical solution but you may want to consider breaking-out enhancements as options (see the proposer-information-packet). With respect to Task B, the dollar figure given (namely \$100 per node) is a desired end cost per node. There is no specified contract target size for Task B. As always, it is your job to create a visionary solution and support it with a good proposal. Costs should be appropriate for your vision though again, options should be considered.

4. Question: I have a vision that is somewhat larger / different in some ways than what is articulated in the PIP, can I still propose?

Answer: DARPA seeks visionary ideas and technologies. If your ideas are within scope, write a proposal. If you are unsure, ask. Depending on the nature of your ideas, breaking them out as options may be appropriate.

5. Question: Is this a systems program or a technology program?

Answer: It has some elements of each. One could consider the basic underlying challenge to prove that robotic movement is an effective way to support communications and that this can be done in a cost efficient fashion. Once the basic Phase I technologies are developed, there are many enhancements or secondary technologies that could / can play a role in developing a fieldable system.

6. Question: I have a great idea about how to combine X, Y, Z, current technology with the distributed control technologies to the benefits of each. However, this may not be well supported by the government specified platforms and off-the-shelf components.

Answer: Feel free to articulate this in your proposal. As structured, on the software side, the first phase is primarily about finding the best ways to control node movement. Synergies can be exploited / added to the benefit of movement algorithms downstream. Your proposal is yours to write. Some ideas like this may lend themselves to options.

7. Question: How sophisticated should the robotic platforms be?

Answer: Read the BAA. If you are thinking of building C3PO (from Star Wars), you are probably on the wrong page.

8. Question: Why aren't LANdroids much larger and much more capable?

Answer: Read the BAA.

9. Question: Do I need to write separate proposals if I am proposing to both Task A and Task B?

Answer: Yes.

10. Question: I have lots of ideas – will the program execute exactly as it is spelled out in the BAA?

Answer: Good proposals and strong results for the first phase could change the scope of the subsequent phases. (You can, however, count on the gate requirements being clearly spelled out at the start of each phase.)

11. Question: Will multiple awards be made on both technical tasks?

Answer: All work is dependent on the availability of funding, however, multiple awards are envisioned for both technical tasks.

12. Question: Is the 12 month phase structure set in stone?

Answer: Yes. Options should adhere to the 12 month structure also.

13. Question: Are you accepting classified proposals? Are classified proposals required?

Answer: Read the BAA. The answers respectively are “yes” and “no.”

14. Question: Can small companies propose? Can universities propose? Can large companies propose?

Answer: Yes to all of the above. DARPA seeks good proposals (and good work). It is that simple.

15. Question: Is X, Y, or Z a reasonable way to solve the LANdroid control problem?

Answer: Your proposal is yours to write. I would suggest that you need to have an idea of how to solve the problem prior to proposing otherwise your costs will be high or your proposal probably won't be technically compelling.

16. Question: Should I team with X, Y, or Z?

Answer: Your proposal is yours to write.

17. Question: How much of the robotic side of things do I need to understand if I am a software person?

Answer: Read the BAA and develop a working understanding of the scale and scope of the envisioned LANdroid platforms. The same is true for the robotic proposers. Be sure you understand scale, scope, and the concept of operations articulated in the BAA.

18. Question: I have some questions about the publication language in the BAA.

Answer: ~~Ask the program manager. Email is the fastest route for a response.~~ The language in the BAA has been modified. Please consult the BAA first.

19. Question: Do we need to list qualifications for subcontractor PIs?

Answer: Yes. You should address the qualifications item in the BAA for everyone you consider a key individual.

20. Question: Can you expand on the publication review process in the BAA?

Answer: ~~We will be updating the BAA shortly with modified language that pertains to this matter.~~ Note, the BAA has been updated. The local copy is here:

[http://www.darpa.mil/ipto/solicitations/open/07-46\\_PIP.pdf](http://www.darpa.mil/ipto/solicitations/open/07-46_PIP.pdf)

21. Question: Can I add sensors to the envisioned robotic platform?

Answer: Yes. Propose what makes sense to you. I'd suggest keeping in mind the small, inexpensive, and "smart" articulation that appears in the BAA.

22. Question: Can I propose to both a technical task and an evaluation task?

Answer: We will avoid conflict-of-interest situations between technical and evaluation tasks.

23. Question: I'm still not sure about the publication centric language in the BAA.

Answer. The language in the BAA reflects 6.2 funding. It describes the conditions under which publication requirements might be applied to contracts to protect national interests. If you have concerns on this front, please read the language carefully. You will find the same language in the IPTO Office BAA.

24. Question: I am not at US company or university, can I still propose?

Answer: Please read the entire BAA -- including the "ELIGIBILITY INFORMATION" section and the "Eligible Applicants" subsection.

25. Question: Do I know which node is the gateway?

Answer: Assume that the gateway node has a unique identifier. {However, you should not assume that all deployed LANDroids can reach the gateway directly.}

26. Question: What type of funding is anticipated for this program?

Answer: 6.2.

27. Question: Will there be a standard API for interfacing with the Task B robots from the Task A software level? Will you be releasing one prior to August 16 (initial closing date)?

Answer: There are many possible models -- we will discuss these during the course of Phase 1. We will not be releasing or developing this prior to the initial closing date.

28. Question: Is faster better for the Task B platform?

Answer: The BAA states minimum performance requirements. You must decide for yourself what makes a compelling overall package technically and then articulate it in your proposal.

29. Question: Can I put control algorithms on a computer that exists outside of the gateway, e.g., back in the basement of the Pentagon?

Answer: No. Your focus area is on the deployed LANDroid network.

30. Question: Are fractions of a wavelength sufficient distance for a LANDroid to move?

Answer: No. Fractions of a wavelength can change multi-path characteristics but capabilities such as self-healing, tethering, etc., may require greater movement.

31. Question: Why didn't the BAA or your slides mention academic studies on X, Y, Z or experiments like A, B, C?

Answer: Neither the BAA nor the bidders briefing slides are exhaustive tutorials or research surveys on a given area. Some lightweight examples of a subset of relevant topics are given to clarify the area of interest of the solicitation. Proposers are responsible for doing their own research, understanding the problems, and creating solutions which are well articulated in their proposals.

32. Question: The iRobot Create is given as a "reference architecture" in the materials – how far might one of those move? How about some analogous platform? What is the general scale – 10-20 feet? I'm a task A performer – will the platform's range be a limiting factor?

Answer: You are responsible for your own computations on this front. However, in general, a platform like that is relatively capable, e.g., running at a moderate pace such as 0.5m/s it may execute for 3-5 hours. Taking the lower bound of 3 hours this results in ~5,400 meters or ~3.3 miles. Different platforms will have different capabilities and the Task A performers will have to manage power intelligently for a given platform. However, the concept of operations is not limited to total movement of a few feet.

33. Question: On the robot hardware side, even after I identify a platform, there are still a few choices that can be made later that don't impact costs much. How would you suggest I articulate those?

Answer: One could put the options in a table.

34. Question: For the Task A performers, will the robot platforms be government furnished equipment?

Answer: For your proposal costing, assume this is the case.

35. Question: If LANdroids move at 0.5 meters per second, how can they tether to a warfighter?

Answer: (1) For an operational setting, speeds may be greater. (2) One should also realize that there is “signal space” and “physical space.” LANdroids and warfighters will operate in both. A LANdroid doesn’t necessarily have to chase a warfighter down a hallway, moving in the same direction and the same speed, to keep him/her covered in communications.

36. Question: Are there any preferences for the location of the test facility for proposers of Tasks C and D?

Answer: You need to decide for yourself what makes a compelling proposal. Location is one factor to consider but there are also many technical aspects also. The wrong test site in a good location probably won’t be very compelling.

37. Question: I’m a Task A proposer, will the evaluations be restricted to one channel?

Answer: You will have control of a platform that is equipped with 802.11/wifi. As it stands now, we envision you being able to make the choice of whether to use a single channel or multiple. We may revisit this topic with the awarded Task A performers and the evaluation team in the future. If you need one model or the other for some aspect of your solution, articulate it in the proposal.

38. Question: Can I propose to implement and support a MANET protocol for the Task A teams for Phases I and II?

Answer: Your proposal is your own to write. You may want to consider something like this as an option.

39. Question: Can you say a few words in general about the role of options versus ideas that go in the main proposal?

Answer. Your proposal is your own to write. However, a reasonable way to assess things is that if the idea is not called for in the BAA, and it adds cost, you may want to include it as an option.

40. Question: For the robot centric evaluation task, in the latter program phases, I am to evaluate Task A software running on the Task B platforms -- does every Task A technology need to run on every Task B platform? How many Task A software systems will there be? How many Task B robotic platforms?

Answer: We won't have exact numbers until we reach that phase. If all possible combinations of Task A and Task B technologies results in a large number, we will use a representative set, e.g., 2 Task A algorithms on each Task B platform or something akin to that. For your costing, you can make a table or specify ranges of costs for ranges of numbers of tests, etc.

41. Question: I'm a Task B performer, how many LANdroids should I make?

Answer: For phases 1 and 2, smaller numbers of LANdroids are required, e.g., 3 for Phase 1, 5-8 for Phase 2. For Phase 3, larger numbers are required to support selective co-development of and experimentation with the Task A performer software. Order of magnitude for Phase 3 is 15-20. If these decisions greatly impact costing, use a table to break out the costs.